

# Management Analysis and Reporting System (**MARS**) Reporting & Querying (**R&Q**)

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## - The Data Behind The Data -



# Objectives / Agenda

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## Objectives...You should be able to:



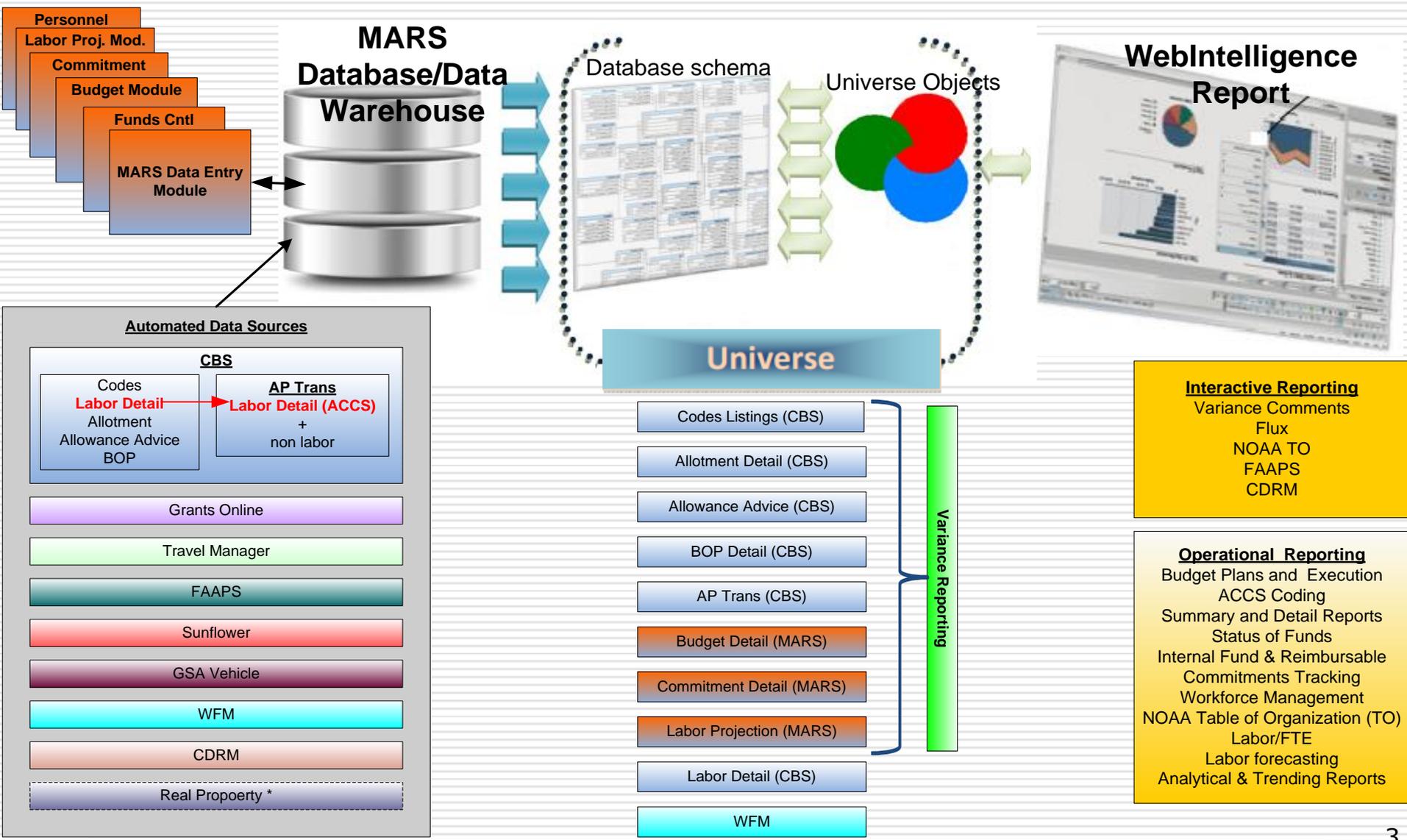
- Identify MARS data sources, data flow, and output
- Understand the MARS universes
  - Understand what a universe is
  - Understand how the MARS universes support the budget planning and execution processes
  - Understand the types (detailed and aggregated) of MARS universes and their elements
  - Know how to select and when to combine universes
- Build and format Web Intelligence reports

## Agenda

- MARS Conceptual Overview
- Lesson I:** MARS Universes Overview
- Lesson II:** Labor Analysis universes
- Lesson III:** AP Trans universe
- Lesson IV:** Variance Reporting Universe



# Conceptual Overview (The Big Picture)



# Lesson I: MARS Universes Overview

□ **What is a universe?**

□ **Universe Objects**

- Condition
- Prompt
- Measure
- Dimension



□ **Selecting the right MARS universe**

□ **ACCS Classification and how it relates to MARS universes**

□ **When to use Prog1 vs Org1, or both together ?**

# What is a Universe?

Business representation of NOAA's data that empowers users to drag and drop intuitive business elements to design their own reports and perform analysis

## Universe Objects

- Condition:** used to restrict and control data a report contains. As a result, it reduces report execution times
- Prompt:** it is a prompted condition: a user can request multiple subsets of data and the results will be displayed on the same report
- Measure:** numerical value (Net amount, Dollars, Hours, FTE, etc.). It represents how much or how many
- Dimension:** characteristic (Employee Name, LO, Fiscal Year, etc.) that describes an entity (Employee, Organization...) and that provides a context to analyze your measures. It represents who, what, when, where

The screenshot shows the 'Query Panel' interface. On the left, a tree view under 'MARS Variance Reporting' contains folders for 'Conditions', 'Prompts', 'Measures', and 'Dimensions'. The 'Measures' folder is highlighted with a blue box and labeled 'Measures' with a blue arrow. The 'Conditions' and 'Prompts' folders are highlighted with a yellow box and labeled 'Conditions and Prompts' with a yellow arrow. On the right, the 'Result Objects' pane shows a list of objects with instructions: 'To include data in reports, select objects on the Universe pane and add them here by clicking the arrow or using drag-and-drop. Click Run Query to return the results.' Below this, the 'Query Filters' pane has instructions: 'To filter the query, select predefined filters or objects in the Universe pane and add them here by clicking the arrow or using drag-and-drop. Select Filter to specify the values you want returned to reports or select Prompt to define a message so users can select values of their choice.'

**Conditions**

- Exclude Fund 0002
- Exclude Fund 0080
- Exclude Expired Funds
- Exclude Leave and Benefits Programs
- Exclude Surcharges & Over-Under

**Prompts**

- Program Group Prompt
- FY Prompt
- FY - FM <= Prompt
- FY - FM = Prompt
- GL End Date Prompt
- GL End Date Range Prompt

**Measures**

- Actual
- Actual - Undel
- Actual - Unpd
- Actual - Paid
- Actual FTE (Org)
- Actual FTE (Program)
- Actual FTE (All)

**Dimensions**

- Activity
- Activity Descr
- Activity Code / Descr
- Activity Short Name
- Sub-Activity
- Sub-Activity Descr
- Sub-Activity Code / Descr

# Selecting the right MARS universe

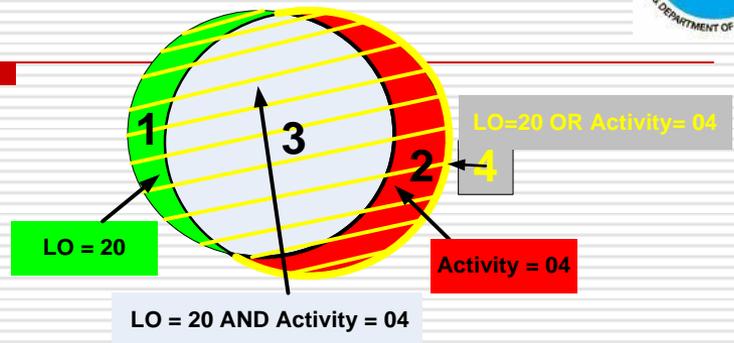
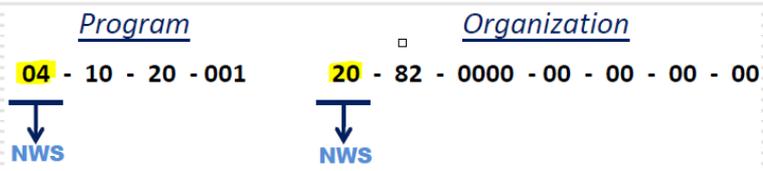
Processes	Data Source	Universes	Measures	Dimensions
BUDGET PLANNING	CBS	MARS Allotment Detail (CBS)	Allotment Amount	Approval Date Allotment Control Allotment Details Notes
	MARS Data Entry	MARS Allowance Advice (MARS)	Allocation Allocation Reserve	Allowance Advice Details Allowance Advice Reserve Details
		MARS Budget Detail (MARS)	Budget Amount Budget FTE	Transaction Details Corresponding Org Rates MARS OPT
		MARS Labor Projection (MARS)	Dollars Hours FTE Employee Count	Employees Vacancies PP Covered Transaction Details Additional Labor Info Labor Data Status
	CBS	MARS BOP Detail (CBS)	BOP Amount BOP FTE Labor Dollars Non-Labor Dollars	Approval Date Transaction Details Notes Corresponding Org Rates MARS OPT
BUDGET EXECUTION	MARS Data Entry	MARS Commitment Detail (MARS)	Commitment	MARS OPT MARS Affected Document Commitment Master Commitment Details
		MARS Labor Projection (MARS)	(See Above)	(See Above)
	CBS	MARS AP Trans (CBS)	Undelivered Unpaid Paid Net Amount FTE Hours Credit Amount Debit Amount PY Downward (undelivered,...)	Affected Document Chart Document Chaining Vendor Customer Transaction Details ESPS MARS OPT PP Processed PP for Reporting
	CBS	MARS Labor Detail (CBS)	Dollars Hours FTE Employee Count Comp Earned or Used (Hours, Dollars)	Employees PP Covered PP Processed PP for Reporting Additional Labor Info Labor Data Status MARS OPT

Variance Reporting Universe

ACCS



# When to use Prog1 vs Org1, or both together?



- ❑ **1) Org1 (LO) = 20**
  - All programs NWS is executing regardless of the funding sources (includes the **transfers in** from other Line Offices and Staff Offices)
- ❑ **2) Prog1 (Activity) = 04**
  - All NWS programs regardless of who is executing them (includes the **transfers out** to other Line Offices and Staff Offices)
- ❑ **3) Org1 (LO) = 20 AND Prog1 (Activity) = 04**
  - All NWS programs executed only by NWS with NWS money
- ❑ **4) Org1 (LO) = 20 OR Prog1 (Activity) = 04: "Program Group Code" prompt**
  - All NWS programs regardless of who is executing them, as well as all the other LO's programs executed by NWS
  - The "Program Group Code" prompt is implemented in universes such as the Variance Reporting and the GL Account Summary (used for NOAA Flux Analysis)

Prompts Summary	Program Group
→ * Program Group Code	Type values here
	Master Progr:
	CFMD
	Internal Fund
	NESDIS
	NMFS
	NOS
	NWS
	OAR
	OMAO
	VAR



# Pay Period Definitions

	PP COVERED	PP PROCESSED	PP FOR REPORTING
LABN	2015-18	2015-18	2015-18
ADJ	2015-18	2015-20	2015-20
Residue	2015-18	2015-19	2015-19

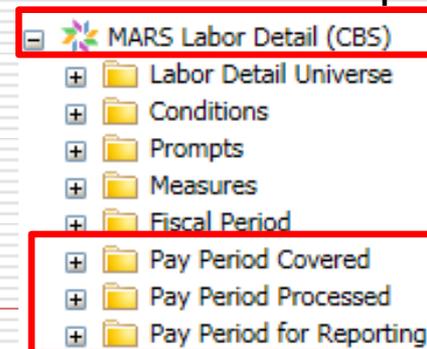
## Examples of labor data types:

**LABN:** Actual NOAA Labor

**ADJ:** Labor Adjustment

**Residue:** Labor records that were not processed in the initial run

- ❑ **Pay Period Covered:** PP in which work was performed
  - The Pay Period Covered is present only in the Labor Detail universe
- ❑ **Pay Period Processed:** PP that the NFC processed the data, including adjustments from previous PP. It captures what was paid out
- ❑ **Pay Period for Reporting:** The PP to which NOAA will report the data, generally the same as the PP processed



# Labor Detail Universe

**FMC=20-30; Project Code= P8MWWFG, PP Processed=2015-19**

PP Processed Year-No	Full Name	Employee Title	4-Digit Object Code / Descr	Hours	Dollars
2015-19	DOE, JOHN	MTRLGST	11-12 PERS COMP FTP GS, GM, SES	16.00	831.84
2015-19	DOE, JOHN	MTRLGST	12-32 EMPLOYER'S CONTRIBUTION TO FEHBA	0.00	89.08
2015-19	DOE, JOHN	MTRLGST	12-33 EMPLOYER'S CONTRIBUTION TO FEGLI	0.00	1.66
2015-19	DOE, JOHN	MTRLGST	12-34 EMP CONTRIB. MEDICARE NON NOAA CORPS	0.00	11.31
2015-19	DOE, JOHN	MTRLGST	12-36 REGULAR EMPLOYER RETIREMENT CONTR - FERS	0.00	109.80
2015-19	DOE, JOHN	MTRLGST	12-37 REGULAR EMPLOYER FICA CONTRIBUTIONS-FERS	0.00	48.36
2015-19	DOE, JOHN	MTRLGST	12-38 THRIFT SAVING PLAN BASIC EMPLOYERS CONTR	0.00	8.32
2015-19	DOE, JOHN	MTRLGST	12-39 TSP MATCHING EMPLOYER'S CONTRIBUTION	0.00	33.27
2015-19	BENZ, MERCEDES	LEAD MTRLGCL TECHNCN	11-12 PERS COMP FTP GS, GM, SES	8.00	313.92
2015-19	BENZ, MERCEDES	LEAD MTRLGCL TECHNCN	11-52 PERSONNEL COMP NIGHT DIFFERENTIAL	0.00	19.60
2015-19	BENZ, MERCEDES	LEAD MTRLGCL TECHNCN	12-32 EMPLOYER'S CONTRIBUTION TO FEHBA	0.00	33.46
2015-19	BENZ, MERCEDES	LEAD MTRLGCL TECHNCN	12-34 EMP CONTRIB. MEDICARE NON NOAA CORPS	0.00	4.64
2015-19	BENZ, MERCEDES	LEAD MTRLGCL TECHNCN	12-36 REGULAR EMPLOYER RETIREMENT CONTR - FERS	0.00	41.44
2015-19	BENZ, MERCEDES	LEAD MTRLGCL TECHNCN	12-37 REGULAR EMPLOYER FICA CONTRIBUTIONS-FERS	0.00	19.81
2015-19	BENZ, MERCEDES	LEAD MTRLGCL TECHNCN	12-38 THRIFT SAVING PLAN BASIC EMPLOYERS CONTR	0.00	2.14
				<b>24.00</b>	<b>1,569.65</b>

**Labor by PP and Employee / ACCS in Labor Detail Universe**

**AP Trans Universe or Variance Reporting Universe**

**Labor summarized at the ACCS Level in AP Trans: Individual Employee information does not appear**

PP Processed Year-No	4-Digit Object Code / Descr	Hours	Dollars
2015-19	11-12 PERS COMP FTP GS, GM, SES	24.00	1,145.76
2015-19	11-52 PERSONNEL COMP NIGHT DIFFERENTIAL	0.00	19.60
2015-19	12-32 EMPLOYER'S CONTRIBUTION TO FEHBA	0.00	122.54
2015-19	12-33 EMPLOYER'S CONTRIBUTION TO FEGLI	0.00	1.66
2015-19	12-34 EMP CONTRIB. MEDICARE NON NOAA CORPS	0.00	15.95
2015-19	12-36 REGULAR EMPLOYER RETIREMENT CONTR - FERS	0.00	151.24
2015-19	12-37 REGULAR EMPLOYER FICA CONTRIBUTIONS-FERS	0.00	68.17
2015-19	12-38 THRIFT SAVING PLAN BASIC EMPLOYERS CONTR	0.00	11.46
2015-19	12-39 TSP MATCHING EMPLOYER'S CONTRIBUTION	0.00	33.27
		<b>24.00</b>	<b>1,569.65</b>

# Month-end Labor

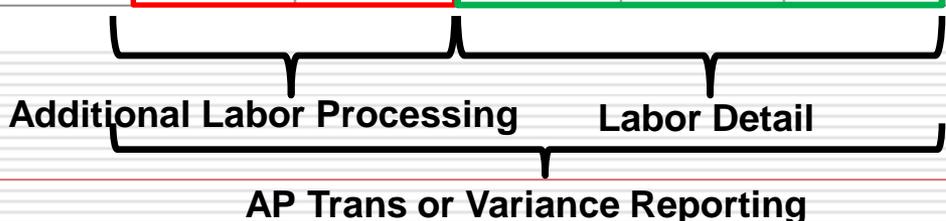
20-30 NATIONAL WEATHER SERVICE-CENTRAL REG

Project Code= P8MWWFG

Labor Data by Labor Type Report

2016- 02-NOVEMBER	2015/11/02 Estimate Reversal 2015-21	2015/11/12 Estimate 2015-23	Pay Period 2015-20	Pay Period 2015-21	Pay Period 2015-22	Total
11-12-00-00 PERS COMP FTP GS, GM, SES	-1,689,277.55	2,029,884.52	371.04	1,843,307.58	1,698,895.50	3,883,181.09
11-12-50-00 CREDIT HOURS USED	-7,675.95	12,676.31		11,523.93	7,409.84	23,934.13
11-12-61-00 ANNUAL LEAVE USED	-174,686.64	184,871.51		170,106.55	148,420.81	328,712.23
11-12-62-00 SICK LEAVE USED	-38,187.99	63,285.89		57,532.57	53,879.92	136,510.39
11-12-64-00 COMP LEAVE USED	-22,650.80	25,537.44		23,215.73	22,041.81	48,144.18
11-12-65-00 REG MILITARY LEAVE USED	-1,184.00	1,016.22		539.90	341.28	713.40
11-12-66-00 OTHER PAID ABSENCE	-171,487.39	478.12		434.65	174,922.27	4,347.65
11-12-68-00 EMERGENCY MILITARY LEAVE	-814.32	995.28		1,006.59		1,187.55
11-15-66-00 OTHER PAID ABSENCE	-2,114.76	894.75		813.40	1,335.57	928.96
11-32-00-00 PART-TIME WITH PERMANENT APPOINTMENT	-1,266.95	1,613.12		1,466.46	1,455.89	3,268.52
11-32-66-00 OTHER PAID ABSENCE	-109.44					-109.44
11-51-00-00 OVERTIME (INCLUDES STANDBY PAY)	-18,788.25	20,068.43	56.91	18,300.90	32,230.61	51,868.60
11-52-00-00 PERSONNEL COMP NIGHT DIFFERENTIAL	-47,461.43	52,877.94	-16.85	48,039.41	47,350.78	100,789.85
11-52-61-00 ANNUAL LEAVE USED	-39.55	23.87		21.70	38.64	44.66
11-52-66-00 OTHER PAID ABSENCE	-1,156.13			29.58	1,446.16	319.60
11-56-00-00 PERSONNEL COMPENSATION ON SUNDAY DIFF	-61,010.40	71,170.92		64,835.76	62,826.71	137,822.99
11-56-66-00 OTHER PAID ABSENCE	-2,317.20				848.14	-1,469.06
11-57-00-00 PERSONNEL COMPENSATION HOLIDAY PAY					140,148.03	140,148.03
12-18-00-00 PERSONNEL BENEFITS OTHER NON NOAA CORPS		162.69		147.90		310.59
12-30-00-00 FICA - (NON FERS) NON NOAA CORPS	-125.02	137.53		125.02	125.02	262.55
12-31-00-00 EMPLOYER'S CONTRIBUTION TO CSRS	-8,676.57	9,544.33		8,676.57	8,692.96	18,237.31
12-32-00-00 EMPLOYER'S CONTRIBUTION TO FEHBA	-212,216.31	233,326.47		212,114.53	211,647.86	444,872.55
12-33-00-00 EMPLOYER'S CONTRIBUTION TO FEGLI	-3,584.33	3,945.59	0.77	3,585.82	3,560.77	7,508.62
12-34-00-00 EMP. CONTRIB. MEDICARE NON NOAA CORPS	-32,710.94	33,855.31	5.97	30,774.37	32,991.74	64,916.45
12-36-00-00 REGULAR EMPLOYER RETIREMENT CONTR - FERS	-270,774.66	297,970.26	48.98	270,843.81	270,566.57	568,654.96
12-37-00-00 REGULAR EMPLOYER FICA CONTRIBUTIONS-FERS	-131,089.12	133,983.57	25.48	121,795.87	128,202.09	252,917.89
12-38-00-00 THRIFT SAVING PLAN BASIC EMPLOYERS CONTR	-19,854.65	21,849.90	3.71	19,859.58	19,844.85	41,703.39
12-39-00-00 TSP MATCHING EMPLOYER'S CONTRIBUTION	-74,367.72	81,971.49	14.84	74,507.19	74,316.08	156,441.88
<b>MONTH TOTAL</b>	<b>-2,993,628.07</b>	<b>3,282,141.46</b>	<b>510.85</b>	<b>2,983,605.37</b>	<b>3,143,539.51</b>	<b>6,416,169.52</b>

Note: Estimate based on pay period 2015-21



# Lesson III: AP Trans universe

## □ AP Trans: Noteworthy Objects

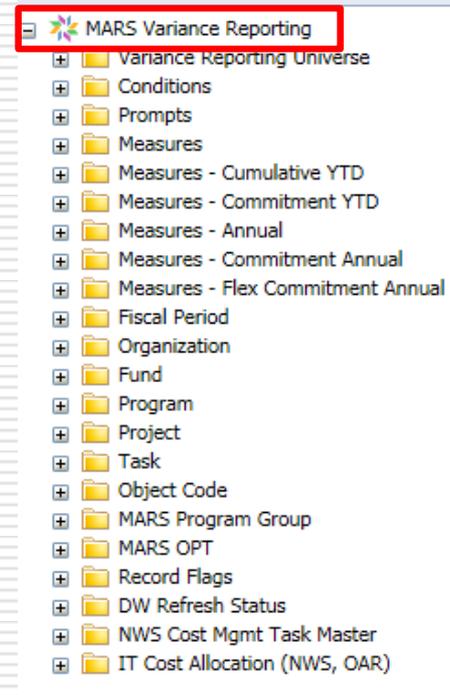
- When to use Transaction Date vs GL End Date?





# Lesson IV: Variance Reporting universe

- **Variance universe measures (Monthly, YTD, Annual)**
  - How to use them?
  - Flex Measures



# How to find the Variance universe measures?

- All the measures in the Detailed universes are aggregated at the monthly grain in the Variance Reporting universe, and they are grouped in folders

Measures	Measures - Cumulative YTD	Measures - Annual	Measures - Commitment YTD
Actual	YTD Actual	YTD Actual	YTD MARS Budget
Actual - Undel	YTD Actual - Undel	YTD Actual FTE (Org)	YTD MARS Commitment
Actual - Unpd	YTD Actual - Unpd	YTD Actual FTE (Program)	YTD MARS Remaining Commitment
Actual - Paid	YTD Actual - Paid	YTD Actual FTE (All)	YTD MARS Encumbrance
Actual FTE (Org)	YTD Actual FTE (Org)	YTD Hours (Stat Unit Qty)	YTD MARS Projected FTE Remaining Commitment
Actual FTE (Program)	YTD Actual FTE (Program)	Annual Program Authority	YTD MARS Projected FTE
Actual FTE (All)	YTD Actual FTE (All)	Annual Program Authority Balance	YTD MARS Work Hours
Hours (Stat Unit Qty)	YTD Hours (Stat Unit Qty)	Annual Allotment	Measures - Annual
Program Authority Amount	YTD Program Authority Amount	Annual Allotment Balance	Measures - Commitment Annual
Program Authority Variance	YTD Program Authority Variance	Annual MARS Allowance Advice	MARS Allotment (Snapshot)
Allotment Amount	YTD Allotment Amount	Annual MARS Allowance Reserve	MARS Budget
Allotment Variance	YTD Allotment Variance	Annual MARS Budget	MARS Commitment
MARS Allowance Advice	YTD MARS Allowance Advice	Annual MARS Budget FTE	MARS Remaining Commitment
MARS Allowance Reserve	YTD MARS Allowance Reserve	Annual BOP	MARS Encumbrance
MARS Budget	YTD MARS Budget	Annual BOP Balance	MARS Projected FTE Remaining Commitment
MARS Budget FTE	YTD MARS Budget Variance	Annual BOP FTE (Org)	MARS Projected FTE
BOP Amount	YTD MARS Budget FTE	Annual BOP FTE (Program)	MARS Work Hours
BOP Variance	YTD MARS Budget FTE Variance (Org)	Annual BOP FTE (All)	MARS Commit Balance
BOP FTE (Org)	YTD BOP Amount	Annual BOP Balance FTE (Org)	MARS Commit Balance FTE (Org)
BOP FTE (Program)	YTD BOP Variance	Annual BOP Balance FTE (Program)	MARS Commit Balance FTE (Program)
BOP FTE (All)	YTD BOP FTE (Org)		Measures - Flex Commitment Annual
BOP Variance FTE (Org)	YTD BOP FTE (Program)		MARS Flex Budget
BOP Variance FTE (Program)	YTD BOP FTE (All)		MARS Flex Commitment
Actual - PY Dnward Incl	YTD BOP Variance FTE (Org)		MARS Flex Remaining Commitment
Actual - Undel - PY Dnward Incl	YTD BOP Variance FTE (Program)		MARS Flex Encumbrance
Actual - Unpd - PY Dnward Incl			MARS Flex Projected FTE Remaining Commitment
Actual - Paid - PY Dnward Incl			MARS Flex Projected FTE
			MARS Work Hours



# Flex measures

## Flex Plan Measures

**Measures - Flex Plan - Annual**

- Annual Flex Plan Amount
- Annual Flex Plan Balance
- Annual Flex Plan FTE (Org)
- Annual Flex Plan FTE (Program)
- Annual Flex Plan FTE (All)
- Annual Flex Plan Balance FTE (Org)
- Annual Flex Plan Balance FTE (Program)

**Prompts**

Prompts Summary

- \* Funding Source **MARS Budget**
- \* FMC or LO for all \*
- \* Fiscal Year **2016**
- \* Fiscal Month Number **0**

**Funding Source**

- CBS BOP
- CBS Allotment
- MARS Allowance Advice
- MARS Budget
- MARS Budget w/o MEMO or INT

**Measures - Flex Plan - YTD**

- YTD Flex Plan Amount
- YTD Flex Plan Variance
- YTD Flex Plan FTE (Org)
- YTD Flex Plan FTE (Program)
- YTD Flex Plan FTE (All)
- YTD Flex Plan Variance FTE (Org)
- YTD Flex Plan Variance FTE (Program)

## Flex Commitment Measures

### Current and Cumulative Year-End Data (as of last refresh)

- Data as of last MARS refresh for the current year
- For a previous year, this prompt value will reflect all the adjustments made on commitments after year-end for that previous fiscal year

### Month-End Snapshot (Monthly aggregate)

- Month-to-date data for a given month, until the month is close
- September monthly snapshots do not include year-end adjustments

**Measures - Flex Commitment Annual**

- MARS Flex Budget
- MARS Flex Commitment
- MARS Flex Remaining Commitment
- MARS Flex Encumbrance

**Prompts**

Prompts Summary

- \* Activity Code (Prog 1) or \* for all \*
- \* Funding Source **MARS Allowance Advice**
- \* Commitment Source **Month-End Snapshot**

**Commitment Source**

- Current and Cumulative Year-End Data
- Month-End Snapshot

# Drillable Objects

**Click to drill down**

			2016
20	NATIONAL WEATHER SERVICE	ORF	455,375,046
20	NATIONAL WEATHER SERVICE	PAC	56,869,184
20	NATIONAL WEATHER SERVICE	REIMB	20,183,594

**Drill down** (Red arrow pointing down)

**Drill up** (Green arrow pointing up)

			2016
20-00	BUDGET USE ONLY - NWS	REIMB	515,287
20-01	OFC OF THE ASST ADMIN FOR WEATHER SVCS	ORF	8,223,137
20-01	OFC OF THE ASST ADMIN FOR WEATHER SVCS	PAC	29,535
20-01	OFC OF THE ASST ADMIN FOR WEATHER SVCS	REIMB	239,092
20-02	OFC OF CLIMATE, WATER AND WEATHER SERV	ORF	2,407

**Click to drill up** (Green arrows pointing to the REIMB and ORF columns)

- [-] MARS Variance Reporting
  - [-] Fiscal Period
    - [-] Drillable Objects - FP
      - Fiscal Year (Drill)
      - Fiscal Quarter (Drill)
      - Fiscal Month Number (Drill)
      - Fiscal Month Number-Short Name (Drill)
  - [-] Organization
    - [-] Drillable Objects - Org
      - LO (Drill)
      - LO Code / Descr (Drill)
      - LO Short Name (Drill)
      - FMC (Drill)
      - FMC / FMC Descr (Drill)
      - FMC Short Name (Drill)
      - Org Level 3 Code (Drill)
      - Org Level 3 Code / Descr (Drill)
      - Org Level 4 Code (Drill)
      - Org Level 4 Code / Descr (Drill)
      - Org Level 5 Code (Drill)
      - Org Level 5 Code / Descr (Drill)
      - Org Level 6 Code (Drill)
      - Org Level 6 Code / Descr (Drill)
      - Org Level 7 Code (Drill)
      - Org Level 7 Code / Descr (Drill)
      - Org Short Name (Drill)
  - [-] Fund
    - [-] Drillable Objects - Fund
      - Direct / Reimb Descr (Drill)
      - Direct / Reimb Abbr (DIRECT/REIMB) (D)
      - Fund Group (ORF, PAC, Etc.) (Drill)
      - Fund Group Short Name (Drill)
      - Fund Code (Drill)
      - Fund Code / Descr (Drill)
  - [-] Program
    - [-] Drillable Objects - Program
      - Activity (Drill)
      - Activity Code / Descr (Drill)
      - Sub-Activity (Drill)
      - Sub-Activity Code / Descr (Drill)
      - Line Item (Drill)
      - Line Item Code / Descr (Drill)
      - Program (Drill)

Drillable Objects

# Training Material (MARS Portal)

- ❑ **Webinar** - Recorded step-by-step demonstration videos tailored to MARS users
- ❑ The **“Business User” Guide** - Conveys basic concepts and step-by step directions for: system logon, system navigation, viewing and refreshing reports, saving reports, sending reports, etc.
- ❑ The **“Power User” Guide** - Conveys more advanced concepts and step-by step directions for: Creating Documents, Filtering Document Queries, Report Formatting, Advanced Report formatting, Analytic Features, etc.
- ❑ **Web-based Reporting Module Training via Knowledge Accelerator** - Provides with an understanding of how the screens flow and provides the opportunity to practice processes/operations

